

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF CHEMICAL SAFETY AND
POLLUTION PREVENTION

MEMORANDUM

Date: 25-OCT-2016

Subject: **Acequinocyl:** Acute and Chronic Dietary (Food and Drinking Water) Exposure and Risk Assessment to Support the Petition for Tolerance for Residues in/on Dry Beans, Cucurbit Vegetables, Group 9, Avocado and Tea (Without U.S. Registration) and Crop Group Conversions for Citrus Fruit Group 10-10, Tree Nut Group 14-12, and Fruiting Vegetable Group 8-10.

PC Code: 006329

Decision No.: 511254

Petition No.: 5E8422

Risk Assessment Type: Dietary

TXR No.: NA

MRID No.: 49618301

DP No.: D434585


Registration No.: 66330-38

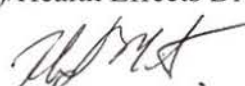
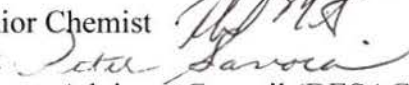
Regulatory Action: Section 3 Registration

Case No.: 7621


CAS No.: 57960-19-7

40 CFR: 180.599

FROM: George F. Kramer, Ph.D., Senior Chemist 
Risk Assessment Branch 1 (RAB1)/Health Effects Division (HED; 7509P)

THROUGH: Thurston Morton, Senior Chemist 
Peter Savoia, Chemist 
Dietary Exposure Science Advisory Council (DESAC)/HED (7509P)

and

Christine Olinger, Acting Branch Chief 
RAB1/HED (7509P)

TO: George F. Kramer, Ph.D., Risk Assessor
RAB1/HED (7509P)

and

Venus Eagle/Andrew Ertman, RM01
Registration Division (RD; 7505P)

Executive Summary

Acute and chronic dietary-exposure and risk assessments were conducted using the Dietary Exposure Evaluation Model (DEEM-FCID, Version 3.16) which uses 2003-2008 food

consumption data from the U.S. Department of Agriculture's (USDA's) National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). The analysis was performed to support a petition for tolerances for residues of the insecticide acequinocyl, 2-(acetyloxy)-3-dodecyl-1,4-naphthalenedione, and its metabolite, 2-dodecyl-3-hydroxy-1,4-naphthoquinone, expressed as acequinocyl equivalents in/on dry beans, cucurbit vegetables, group 9, avocado and tea (without U.S. registration) and crop group conversions for citrus fruit group 10-10, tree nut group 14-12, and fruiting vegetable group 8-10. These analyses have been reviewed by two peer reviewers of the DESAC, per the DESAC Standard Operating Procedure (SOP) 2012.1.

Acute Dietary (Food and Drinking Water) Exposure Results and Characterization

The unrefined acute analysis assumed 100% crop treated (CT), tolerance-level residues, and DEEM 7.81 default processing factors (where provided). Dietary risk estimates were determined considering exposures from food plus drinking water using estimated drinking water concentrations (EDWCs) for surface water sources provided by the Environmental Fate and Effects Division (EFED). The assessment shows that the acute dietary risk estimates at the 95th percentile are not of concern to HED [i.e., <100% acute population-adjusted dose (aPAD)]. The resulting acute dietary (food + water) risk estimates utilized 20% of the aPAD for the general U.S. population and 71% of the aPAD for children 1-2 years old, the most highly exposed population subgroup.

Chronic Dietary (Food and Drinking Water) Exposure Results and Characterization

The unrefined chronic dietary assessment assumed 100% CT, tolerance-level residues, and DEEM 7.81 default processing factors (where provided). EDWC values for surface water sources provided by EFED. The assessment shows that the chronic dietary risk estimates are not of concern to HED [i.e., <100% chronic population-adjusted dose (cPAD)]. The resulting chronic dietary (food + water) risk estimates utilized 17% of the cPAD for the general U.S. population and 70% of the cPAD for children 1-2 years old, the most highly exposed population subgroup.

Cancer

Acequinocyl was classified as "not likely to be carcinogenic to humans"; therefore, a cancer dietary assessment was not performed.

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose which HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the population-adjusted dose (PAD). The PAD is equivalent to point of departure (POD, NOAEL, LOAEL, e.g.) divided by the required uncertainty or safety factors.

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. HED is generally concerned when estimated cancer risk exceeds one in one million. References which discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link:

<http://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OPP-2007-0780-0001&disposition=attachment&contentType=pdf>; or see SOP 99.6 (20-AUG-1999).

The most recent dietary risk assessment for acequinocyl was conducted by G. Kramer (22-MAR-2016; D431306).

II. Residue Information

Residues of Concern: The qualitative nature of acequinocyl residues in primary crops, ruminants, and rotational crops are understood based on the available apple, orange, eggplant, goat, and rotational crop metabolism studies. Based on the structural similarity of acequinocyl-OH to parent and the presence of acequinocyl-OH at quantifiable levels in crops, the HED Metabolism Assessment Review Committee (MARC) concluded that parent and acequinocyl-OH are the residues of concern for risk assessment and tolerance expression in apples, oranges, and eggplant commodities. For purposes of this petition, HED is willing to translate these results to avocado, dried shelled beans, summer squash, and tea.

Table 1. Residues of Concern in Crops, Ruminants, and Drinking Water.		
Matrix	Tolerance Expression	Residues for Risk Assessment
Fruit Crops, Hops, Beans, Squash, and Tea	Acequinocyl + Acequinocyl-OH (R1)	Acequinocyl + Acequinocyl-OH (R1)
Ruminants	Acequinocyl + Acequinocyl-OH (R1)	Acequinocyl + Acequinocyl-OH (R1). In liver and kidney, also include AKM-15.
Rotational Crops	Not Determined*	Not Determined*
Drinking Water	NA**	Acequinocyl + Acequinocyl-OH (R1)

* A confined rotational crop study has been reviewed and a 30-day plant-back interval has been recommended (Memo, S. Levy, 25-JUN-2008; DP# 351336).

** NA = not applicable.

Established Tolerances: Permanent tolerances are currently established under 40 CFR §180.599(a) for the combined residues of acequinocyl and its metabolite, acequinocyl-OH, expressed as acequinocyl equivalents, in/on a number of plant and livestock commodities. Tolerances for plant commodities range from 0.02 ppm (tree nuts and pistachios) to 30 ppm (citrus oil), and tolerances for livestock commodities are established at 0.02 ppm in the fat and liver of cattle, goat, horse, and sheep.

Recommended Tolerances: Based on the residue chemistry data submitted with the current petition, HED recommended for establishment of the tolerances outlined in Table 2 for the combined residues acequinocyl and its metabolite, acequinocyl-OH, expressed as acequinocyl equivalents.

Table 2. Tolerance Summary for Acequinocyl.	
Commodity	Recommended Tolerance (ppm)
Avocado	0.50
Bean, dry, seed	0.15
Vegetable, cucurbit, group 9	0.30
Tea, plucked leaves ¹	40
Cherry, subgroup 12-12A	1.0
Fruit, citrus, group 10-10	0.35
Fruit, pome, group 11-10	0.40
Nut, tree, group 14-12	0.02
Vegetable, fruiting, group 8-10	0.70

¹ There are no U.S. registrations as of [date] for use on tea.

Residue Data Used for Acute and Chronic Assessments: The acute and chronic assessments assumed tolerance-level residues for all commodities.

Fish: The USDA Pesticide Data Program (PDP) monitored pesticide residues in catfish in 2008, 2009, and 2010 and in salmon in 2013 and 2014; however, the samples were not analyzed for acequinocyl. As a result, residues in fish were not included in the assessment.

Processing Factors: For the acute and chronic assessments, DEEM 7.81 default processing factors were used (where provided).

III. Drinking Water Data

The drinking water residues used in the dietary risk assessment were provided by the Environmental Fate and Effects Division (EFED) (M. Lowit, 07-SEP-2011; D389520). Water residues were incorporated directly into DEEM-FCID under the food categories “water, direct, all sources” and “water, indirect, all sources.” Surface water and groundwater EDWCs resulting from the proposed uses will not exceed previously recommended values (F. Jewett *et al.*, 29-FEB-2016; D430808).

Acequinocyl can reach surface water via spray drift and less likely via runoff. Due to its high K_d values it is expected to exhibit low mobility in soil and low potential to leach into groundwater. Once acequinocyl has entered surface water, it is not likely to persist as it will hydrolyze to form hydroxy-acequinocyl (also known as R-1).

There are no drinking water monitoring data available for acequinocyl or its metabolite acequinocyl-OH (R1), the residues of concern. Groundwater estimated drinking water concentrations (EDWCs) were generated for acequinocyl using the Screening Concentration in Ground Water (SCI-GROW) Model. Surface water EDWCs were generated using the Pesticide Root Zone Model/Exposure Analysis Modeling System (PRZM/EXAMS) model for all proposed uses except cranberry (cranberries are part of the low growing berries subgroup, 13-07G). Cranberry harvesting may involve field flooding and PRZM/EXAMS is not currently parameterized to assess this type of scenario; therefore, cranberry was assessed using the provisional cranberry model (note that since the provisional cranberry model only uses a one year simulation, the highest 30-year annual average concentration is not available for the cranberry scenario).

Similar to previous drinking water assessments provided by EFED, two approaches were used in performing the drinking water assessment for proposed acequinocyl uses. In *Approach #1*, acequinocyl was conservatively assumed to be stable to all routes of degradation to account for the uncertainties associated with the environmental fate data. In *Approach #2*, total (acequinocyl + acequinocyl-OH) residues were modeled with the assumption that the half-lives of acequinocyl and R1 are valid and the total toxic residues were modeled to address toxicity concerns with R1. The EDWCs are summarized below in Table 3. Surface water EDWCs for the proposed uses are higher than those previously reported for both approaches. The ground water EDWC for the current assessment is the same as the last assessment.

Table 3. Recommended EDWCs of Acequinocyl Derived from the Previous Uses.

Drinking water source (model)	Proposed Use/Scenario ³	EDWCs from Surface Water Sources (ug/L) ^{1,2}					
		<i>Approach 1</i> (assume no acequinocyl degradation)			<i>Approach 2</i> (combined acequinocyl and R1)		
		1-in-10-year acute	1-in-10-year chronic	30-year mean	1-in-10-year acute	1-in-10-year chronic	30-year mean
Surface water (PRZM/EXAMS)	Cherry/MI cherry	6.69 (25.89) ⁴	6.69 (17.84) ⁴	6.69 (10.19) ⁴	5.59	0.42	0.26
Surface water (PRZM/EXAMS)	Small fruit (vine climbing, except fuzzy kiwifruit, 13-07F)/NY grape	6.69 (23.12) ⁴	6.69 (15.34) ⁴	6.69 (9.57) ⁴	4.22	0.38	0.27
Surface water (Provisional Cranberry Model)	Cranberry/Provisional Cranberry Model	4.24	3.75	--	3.81 ⁵	1.36⁵	--
Groundwater (SCIGROW)	All proposed uses	3.6 x 10 ⁻³	≤3.6 x 10 ⁻³	≤3.6 x 10 ⁻³	3.6 x 10 ⁻³	≤3.6 x 10 ⁻³	≤3.6 x 10 ⁻³

¹ Bolded values are the recommended EDWCs by EFED.

² A default PCA of 0.87 was applied.

³ Maximum of 2 applications of 0.3 lb ai/A for all proposed uses.

⁴ EDWC (shown in parentheses) exceeds the solubility limit of acequinocyl (6.69 µg/L at 20°C); therefore, the recommended EDWC is 6.69 ppb.

⁵ Based on a one-year simulation; 1-10-year calculation is not applicable.

Since the surface water EDWCs are higher than the groundwater EDWC, HED selected the surface water value for use in the chronic dietary assessment. The EDWC derived via Approach #1 represents the upper-bound value (6.69 ppb) while that derived via Approach #2 represents the lower-bound value (1.36 ppb). The 6.69 ppb value was used in this dietary assessment as this value assures a conservative assessment.

IV. DEEM-FCID Program and Consumption Information

Acequinocyl acute and chronic dietary exposure assessments were conducted using DEEM-FCID, Version 3.16, which incorporates consumption data from USDA's NHANES/WWEIA from 2003 through 2008. The data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g., apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups. However, for acute exposure assessment, consumption data are retained as individual consumption events. Based on analysis of the 2003-2008 WWEIA consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50-99 years old.

For a chronic dietary exposure assessment, an estimate of the residue level in each food or food-form (e.g., orange or orange juice) on the food-commodity residue list is multiplied by the average daily consumption estimate for that food/food form to produce a residue intake estimate. The resulting residue intake estimate for each food/food form is summed with the residue intake estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent

of the cPAD. This procedure is performed for each population subgroup.

For an acute exposure assessment, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or “matched” in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (i.e., only those who reported eating relevant commodities/food forms) and a per-capita (i.e., those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for analyses performed at all levels of refinement. However, for deterministic assessments, any significant differences in user vs. per capita exposure and risk are specifically identified and noted in the risk assessment.

V. Toxicological Information

Table 4 is a summary of the toxicology doses and endpoints selected that are relevant to dietary risk assessment (TXR# 0057468). The endpoints have been reviewed by the risk assessment team and are considered appropriate for the current risk assessment.

Table 4. Summary of Toxicological Doses and Endpoints for Acequinocyl for Use in Dietary Risk Assessment.¹				
Exposure/Scenario	Point of Departure	Uncertainty/FQPA SFs	RfD, PAD, Level of Concern	Study and Toxicological Effects
Acute Dietary (General Population, including Infants and Children)	NOAEL = 7.3 mg/kg/day	UF _A = 10X UF _H = 10X FQPA SF = 1X	aPAD = aRfD = 0.073 mg/kg/day	Reproduction and fertility effects in rats Offspring LOAEL (M/F) = 58.9 based on hemorrhagic effects, swollen body parts, protruding eyes, clinical signs, delays in pupil development and increased mortality post weaning.
Chronic Dietary (All Populations)	NOAEL = 2.7 mg/kg/day	UF _A = 10X UF _H = 10X FQPA SF = 1X	cPAD = cRfD = 0.027 mg/kg/day	18-month carcinogenicity study in mice; LOAEL = 7.0 mg/kg/day based on clinical chemistry and microscopic non-neoplastic lesions (brown pigmented cells and perivascular inflammatory cells in liver).
Cancer (oral, dermal, inhalation)		Classification: “Not likely to be Carcinogenic to Humans.”		

¹ UF = uncertainty factor, UF_A = extrapolation from animal to human (interspecies), UF_H = potential variation in sensitivity among members of the human population (intraspecies), FQPA SF = FQPA Safety Factor, NOAEL = no-observed adverse-effect level, LOAEL = lowest-observed adverse-effect level, RfD = reference dose (a = acute, c = chronic), PAD = population-adjusted dose, N/A = not applicable.

VI. Results/Discussion

For acute and chronic assessments, HED is concerned when dietary risk exceeds 100% of the PAD. The DEEM-FCID analyses estimate the dietary exposure of the U.S. population and various population subgroups. The results reported in Table 5 are for the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, females 13-49, adults 20-49, and adults 50-99 years.

Results of Acute and Chronic Dietary Exposure Analyses

The acute dietary risk for food and drinking water utilized 20% of the aPAD for the U.S. population. The acute dietary risk estimate for the highest reported exposed population subgroup, children 1-2 years old, utilized 71% of the aPAD. The chronic dietary risk estimate for food and drinking water utilized 17% of the cPAD for the U.S. population. The chronic dietary risk for the highest reported exposed population subgroup, children 1-2 years old, utilized 70% of the cPAD. Acequinocyl was classified as “not likely to be carcinogenic to humans”; therefore, a cancer dietary assessment was not performed.

Table 5. Summary of Dietary (Food and Drinking Water) Exposure Risk for Acequinocyl¹.

Population Subgroup	Acute Dietary (95 th Percentile)		Chronic Dietary	
	Dietary Exposure (mg/kg/day)	% aPAD	Dietary Exposure (mg/kg/day)	% cPAD
General U.S. Population	0.014800	20	0.004542	17
All Infants (<1 year old)	0.031707	43	0.007507	28
Children 1-2 years old	0.051928	71	0.018976	70
Children 3-5 years old	0.038281	52	0.013259	49
Children 6-12 years old	0.020088	28	0.006188	23
Youth 13-19 years old	0.010001	14	0.003224	12
Adults 20-49 years old	0.010346	14	0.003413	13
Adults 50-99 years old	0.009933	14	0.003357	12
Females 13-49 years old	0.010282	14	0.003280	12

¹ The values for the highest exposed population for each type of risk assessment are bolded.

VII. Characterization of Inputs/Outputs

Both the acute and chronic assessments assumed tolerance-level residues and 100% CT for all commodities. Further refinement to the analyses could be made through the use of field trial residues and translation of average field trial residues to other commodities using HED SOP 2000.1, empirical processing factors, incorporation of percentages of crops treated with acequinocyl, or monitoring data. Since risk estimates are below HED's level of concern, a more highly refined analysis is not required at this time.

VIII. Conclusions

Acute and chronic dietary exposure and risk assessments were conducted for the proposed and permanent tolerances for residues of acequinocyl, including potential exposure from drinking water. The acute and chronic dietary (food + drinking water) exposure and risk estimates for acequinocyl are below HED's level of concern for the general U.S. population and all population subgroups. The most highly exposed population subgroup for both the acute and chronic assessments was children 1-2 years old. This population subgroup utilized 71% of the aPAD and 70% of the cPAD.

IX. List of Attachments

- Attachment 1: Acute Food plus Water Residue Input File
- Attachment 2: Acute Results File
- Attachment 3: Chronic Food plus Water Residue Input File
- Attachment 4: Chronic Results File
- Attachment 5: Acute Exposure and Risk Estimates – Food Only

Attachment 6: Chronic Exposure and Risk Estimates – Food Only

RDI: DESAC (13-JUL-2016)

G.F. Kramer:S10957:PY-S:(703)305-5079:7509P:RAB1

Attachment 1: Acute Food plus Water Residue Input File

Filename: C:\Users\gkramer\OneDrive - Environmental Protection Agency

(EPA)\Gk\\$\$Acequinocyl\006329Acute.R08

Chemical: Acequinocyl

RfD(Chronic): .027 mg/kg bw/day NOEL(Chronic): 2.7 mg/kg bw/day

RfD(Acute): .073 mg/kg bw/day NOEL(Acute): 7.3 mg/kg bw/day

Date created/last modified: 07-05-2016/13:08:48

Program ver. 3.16, 03-08-d

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj. Factors #1	#2	Comment
0601043000	6A	Bean, snap, succulent	0.250000	1.000	1.000	9E7598
0601043001	6A	Bean, snap, succulent-babyfood	0.250000	1.000	1.000	9E7598
0601349500	6AB	Soybean, vegetable	0.250000	1.000	1.000	1E7864
0602031000	6B	Bean, broad, succulent	0.250000	1.000	1.000	1E7864
0602033000	6B	Bean, cowpea, succulent	0.250000	1.000	1.000	1E7864
0602037000	6B	Bean, lima, succulent	0.250000	1.000	1.000	1E7864
0603030000	6C	Bean, black, seed	0.150000	1.000	1.000	
0603032000	6C	Bean, broad, seed	0.150000	1.000	1.000	
0603034000	6C	Bean, cowpea, seed	0.150000	1.000	1.000	
0603035000	6C	Bean, great northern, seed	0.150000	1.000	1.000	
0603036000	6C	Bean, kidney, seed	0.150000	1.000	1.000	
0603038000	6C	Bean, lima, seed	0.150000	1.000	1.000	
0603039000	6C	Bean, mung, seed	0.150000	1.000	1.000	
0603040000	6C	Bean, navy, seed	0.150000	1.000	1.000	
0603041000	6C	Bean, pink, seed	0.150000	1.000	1.000	
0603042000	6C	Bean, pinto, seed	0.150000	1.000	1.000	
0603098000	6C	Chickpea, seed	0.150000	1.000	1.000	
0603098001	6C	Chickpea, seed-babyfood	0.150000	1.000	1.000	
0603099000	6C	Chickpea, flour	0.150000	1.000	1.000	
0603182000	6C	Guar, seed	0.150000	1.000	1.000	
0603182001	6C	Guar, seed-babyfood	0.150000	1.000	1.000	
0603203000	6C	Lentil, seed	0.150000	1.000	1.000	
0801374000	8A	Tomatillo	0.700000	1.000	1.000	9E7598
0801375000	8A	Tomato	0.700000	1.000	1.000	9E7598
0801375001	8A	Tomato-babyfood	0.700000	1.000	1.000	9E7598
0801376000	8A	Tomato, paste	0.700000	5.400	1.000	9E7598
0801376001	8A	Tomato, paste-babyfood	0.700000	5.400	1.000	9E7598
0801377000	8A	Tomato, puree	0.700000	3.300	1.000	9E7598
0801377001	8A	Tomato, puree-babyfood	0.700000	3.300	1.000	9E7598
0801378000	8A	Tomato, dried	0.700000	14.300	1.000	9E7598
0801378001	8A	Tomato, dried-babyfood	0.700000	14.300	1.000	9E7598
0801379000	8A	Tomato, juice	0.700000	1.500	1.000	9E7598
0802148000	8BC	Eggplant	0.700000	1.000	1.000	9E7598
0802234000	8BC	Okra	0.700000	1.000	1.000	9E7598
0802270000	8B	Pepper, bell	0.700000	1.000	1.000	9E7598
0802270001	8B	Pepper, bell-babyfood	0.700000	1.000	1.000	9E7598
0802271000	8B	Pepper, bell, dried	0.700000	1.000	1.000	9E7598
0802271001	8B	Pepper, bell, dried-babyfood	0.700000	1.000	1.000	9E7598
0802272000	8BC	Pepper, nonbell	0.700000	1.000	1.000	9E7598
0802272001	8BC	Pepper, nonbell-babyfood	0.700000	1.000	1.000	9E7598
0802273000	8BC	Pepper, nonbell, dried	0.700000	1.000	1.000	9E7598
0901075000	9A	Cantaloupe	0.300000	1.000	1.000	1E7864
0901187000	9A	Honeydew melon	0.300000	1.000	1.000	1E7864
0901399000	9A	Watermelon	0.300000	1.000	1.000	1E7864
0901400000	9A	Watermelon, juice	0.300000	1.000	1.000	1E7864
0902021000	9B	Balsam pear	0.300000	1.000	1.000	
0902088000	9B	Chayote, fruit	0.300000	1.000	1.000	
0902102000	9B	Chinese waxgourd	0.300000	1.000	1.000	
0902135000	9B	Cucumber	0.300000	1.000	1.000	1E7864
0902308000	9B	Pumpkin	0.300000	1.000	1.000	
0902309000	9B	Pumpkin, seed	0.300000	1.000	1.000	
0902356000	9B	Squash, summer	0.300000	1.000	1.000	
0902356001	9B	Squash, summer-babyfood	0.300000	1.000	1.000	
0902357000	9B	Squash, winter	0.300000	1.000	1.000	
0902357001	9B	Squash, winter-babyfood	0.300000	1.000	1.000	
1001106000	10A	Citron	0.350000	1.000	1.000	
1001107000	10A	Citrus hybrids	0.350000	1.000	1.000	
1001108000	10A	Citrus, oil	30.000000	1.000	1.000	

1001240000	10A	Orange	0.350000	1.000	1.000	
1001241000	10A	Orange, juice	0.350000	1.800	1.000	
1001241001	10A	Orange, juice-babyfood	0.350000	1.800	1.000	
1001242000	10A	Orange, peel	0.350000	1.000	1.000	
1001369000	10A	Tangerine	0.350000	1.000	1.000	
1001370000	10A	Tangerine, juice	0.350000	2.300	1.000	
1002197000	10B	Kumquat	0.350000	1.000	1.000	
1002199000	10B	Lemon	0.350000	1.000	1.000	
1002200000	10B	Lemon, juice	0.350000	2.000	1.000	
1002200001	10B	Lemon, juice-babyfood	0.350000	2.000	1.000	
1002201000	10B	Lemon, peel	0.350000	1.000	1.000	
1002206000	10B	Lime	0.350000	1.000	1.000	
1002207000	10B	Lime, juice	0.350000	2.000	1.000	
1002207001	10B	Lime, juice-babyfood	0.350000	2.000	1.000	
1003180000	10C	Grapefruit	0.350000	1.000	1.000	
1003181000	10C	Grapefruit, juice	0.350000	2.100	1.000	
1003307000	10C	Pummelo	0.350000	1.000	1.000	
1100007000	11	Apple, fruit with peel	0.400000	1.000	1.000	
1100008000	11	Apple, peeled fruit	0.400000	1.000	1.000	
1100008001	11	Apple, peeled fruit-babyfood	0.400000	1.000	1.000	
1100009000	11	Apple, dried	0.400000	8.000	1.000	
1100009001	11	Apple, dried-babyfood	0.400000	8.000	1.000	
1100010000	11	Apple, juice	0.400000	1.300	1.000	
1100010001	11	Apple, juice-babyfood	0.400000	1.300	1.000	
1100011000	11	Apple, sauce	0.400000	1.000	1.000	
1100011001	11	Apple, sauce-babyfood	0.400000	1.000	1.000	
1100129000	11	Crabapple	0.400000	1.000	1.000	
1100173500	11	Goji berry	0.700000	1.000	1.000	
1100210000	11	Loquat	0.400000	1.000	1.000	
1100266000	11	Pear	0.400000	1.000	1.000	
1100266001	11	Pear-babyfood	0.400000	1.000	1.000	
1100267000	11	Pear, dried	0.400000	6.250	1.000	
1100268000	11	Pear, juice	0.400000	1.000	1.000	
1100268001	11	Pear, juice-babyfood	0.400000	1.000	1.000	
1100310000	11	Quince	0.400000	1.000	1.000	
1201090000	12A	Cherry	1.000000	1.000	1.000	1E7864
1201090001	12A	Cherry-babyfood	1.000000	1.000	1.000	1E7864
1201091000	12A	Cherry, juice	1.000000	1.500	1.000	1E7864
1201091001	12A	Cherry, juice-babyfood	1.000000	1.500	1.000	1E7864
1301055000	13A	Blackberry	4.000000	1.000	1.000	1E7864
1301056000	13A	Blackberry, juice	4.000000	1.000	1.000	1E7864
1301056001	13A	Blackberry, juice-babyfood	4.000000	1.000	1.000	1E7864
1301058000	13A	Boysenberry	4.000000	1.000	1.000	1E7864
1301208000	13A	Loganberry	4.000000	1.000	1.000	1E7864
1301320000	13A	Raspberry	4.000000	1.000	1.000	1E7864
1301320001	13A	Raspberry-babyfood	4.000000	1.000	1.000	1E7864
1301321000	13A	Raspberry, juice	4.000000	1.000	1.000	1E7864
1301321001	13A	Raspberry, juice-babyfood	4.000000	1.000	1.000	1E7864
1302057000	13B	Blueberry	0.500000	1.000	1.000	
1302057001	13B	Blueberry-babyfood	0.500000	1.000	1.000	
1304175000	13D	Grape	1.600000	1.000	1.000	
1304176000	13D	Grape, juice	1.600000	1.200	1.000	
1304176001	13D	Grape, juice-babyfood	1.600000	1.200	1.000	
1304179000	13D	Grape, wine and sherry	1.600000	1.000	1.000	
1307130000	13G	Cranberry	0.500000	1.000	1.000	1E7864
1307130001	13G	Cranberry-babyfood	0.500000	1.000	1.000	1E7864
1307131000	13G	Cranberry, dried	0.500000	1.000	1.000	1E7864
1307132000	13G	Cranberry, juice	0.500000	1.100	1.000	1E7864
1307132001	13G	Cranberry, juice-babyfood	0.500000	1.100	1.000	1E7864
1307359000	13G	Strawberry	0.500000	1.000	1.000	1E7864
1307359001	13G	Strawberry-babyfood	0.500000	1.000	1.000	1E7864
1307360000	13G	Strawberry, juice	0.500000	1.000	1.000	1E7864
1307360001	13G	Strawberry, juice-babyfood	0.500000	1.000	1.000	1E7864
1400003000	14	Almond	0.020000	1.000	1.000	
1400003001	14	Almond-babyfood	0.020000	1.000	1.000	
1400004000	14	Almond, oil	0.020000	1.000	1.000	
1400004001	14	Almond, oil-babyfood	0.020000	1.000	1.000	
1400059000	14	Brazil nut	0.020000	1.000	1.000	
1400068000	14	Butternut	0.020000	1.000	1.000	
1400081000	14	Cashew	0.020000	1.000	1.000	
1400092000	14	Chestnut	0.020000	1.000	1.000	

1400155000	14	Hazelnut	0.020000	1.000	1.000
1400156000	14	Hazelnut, oil	0.020000	1.000	1.000
1400185000	14	Hickory nut	0.020000	1.000	1.000
1400213000	14	Macadamia nut	0.020000	1.000	1.000
1400269000	14	Pecan	0.020000	1.000	1.000
1400278000	14	Pine nut	0.020000	1.000	1.000
1400282000	14	Pistachio	0.020000	1.000	1.000
1400391000	14	Walnut	0.020000	1.000	1.000
3100046000	31	Beef, meat byproducts	0.020000	1.000	1.000
3100046001	31	Beef, meat byproducts-babyfood	0.020000	1.000	1.000
3100047000	31	Beef, fat	0.020000	1.000	1.000
3100047001	31	Beef, fat-babyfood	0.020000	1.000	1.000
3100048000	31	Beef, kidney	0.020000	1.000	1.000
3100049000	31	Beef, liver	0.020000	1.000	1.000
3100049001	31	Beef, liver-babyfood	0.020000	1.000	1.000
3200171000	32	Goat, fat	0.020000	1.000	1.000
3200172000	32	Goat, kidney	0.020000	1.000	1.000
3200173000	32	Goat, liver	0.020000	1.000	1.000
3500340000	35	Sheep, meat byproducts	0.020000	1.000	1.000
3500341000	35	Sheep, fat	0.020000	1.000	1.000
3500341001	35	Sheep, fat-babyfood	0.020000	1.000	1.000
3500342000	35	Sheep, kidney	0.020000	1.000	1.000
3500343000	35	Sheep, liver	0.020000	1.000	1.000
8601000000	86A	Water, direct, all sources	0.006690	1.000	1.000
8602000000	86B	Water, indirect, all sources	0.006690	1.000	1.000
9500020000	O	Avocado	0.500000	1.000	1.000
9500111000	O	Coconut, meat	0.020000	1.000	1.000
9500111001	O	Coconut, meat-babyfood	0.020000	1.000	1.000
9500112000	O	Coconut, dried	0.020000	1.000	1.000
9500113000	O	Coconut, milk	0.020000	1.000	1.000
9500114000	O	Coconut, oil	0.020000	1.000	1.000
9500177000	O	Grape, leaves	1.600000	1.000	1.000
9500178000	O	Grape, raisin	1.600000	4.300	1.000
9500188000	O	Hop	15.000000	1.000	1.000
9500372000	O	Tea, dried	40.000000	1.000	1.000
9500373000	O	Tea, instant	40.000000	1.000	1.000

Attachment 2: Acute Results File

US EPA
 DEEM-FCID ACUTE Analysis for ACEQUINOCYL
 Residue file: 006329Chronic.R08
 Analysis Date: 07-05-2016/13:12:35
 NOEL (Acute) = 7.300000 mg/kg body-wt/day
 RAC/FF intake summed over 24 hours
 Run Comment: ""

Ver. 3.18, 03-08-d
 NHANES 2003-2008 2-Day
 Adjustment factor #2 NOT used.
 Residue file dated: 07-05-2016/13:06:48

=====

Summary calculations--per capita:

--- 95th Percentile---			--- 99th Percentile---			---99.9th Percentile---		
Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
Total US Population:								
0.014800	20.27	493	0.032655	44.73	223	0.072059	98.71	101
All Infants:								
0.031707	43.43	230	0.064279	88.05	113	0.123399	169.04	59
Children 1-2:								
0.051928	71.13	140	0.089947	123.21	81	0.184558	252.82	39
Children 3-5:								
0.038281	52.44	190	0.062389	85.46	117	0.103404	141.65	70
Children 6-12:								
0.020088	27.52	363	0.031599	43.29	231	0.053019	72.63	137
Youth 13-19:								
0.010001	13.70	729	0.016683	22.85	437	0.039648	54.31	184
Adults 20-49:								
0.010346	14.17	705	0.017088	23.41	427	0.031527	43.19	231
Adults 50-99:								
0.009933	13.61	734	0.015878	21.75	459	0.025691	35.19	284
Female 13-49:								
0.010282	14.09	709	0.016908	23.16	431	0.032441	44.44	225

Attachment 3: Chronic Food plus Water Residue Input File

Filename: C:\Users\gkramer\OneDrive - Environmental Protection Agency

(EPA)\Gk\\$\$Acequinocyl\006329Chronic.R08

Chemical: Acequinocyl

RfD(Chronic): .027 mg/kg bw/day NOEL(Chronic): 2.7 mg/kg bw/day

RfD(Acute): .073 mg/kg bw/day NOEL(Acute): 7.3 mg/kg bw/day

Date created/last modified: 07-05-2016/13:06:48

Program ver. 3.16, 03-08-d

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj. Factors #1	Adj. Factors #2	Comment
0601043000	6A	Bean, snap, succulent	0.250000	1.000	1.000	9E7598
0601043001	6A	Bean, snap, succulent-babyfood	0.250000	1.000	1.000	9E7598
0601349500	6AB	Soybean, vegetable	0.250000	1.000	1.000	1E7864
0602031000	6B	Bean, broad, succulent	0.250000	1.000	1.000	1E7864
0602033000	6B	Bean, cowpea, succulent	0.250000	1.000	1.000	1E7864
0602037000	6B	Bean, lima, succulent	0.250000	1.000	1.000	1E7864
0603030000	6C	Bean, black, seed	0.150000	1.000	1.000	
0603032000	6C	Bean, broad, seed	0.150000	1.000	1.000	
0603034000	6C	Bean, cowpea, seed	0.150000	1.000	1.000	
0603035000	6C	Bean, great northern, seed	0.150000	1.000	1.000	
0603036000	6C	Bean, kidney, seed	0.150000	1.000	1.000	
0603038000	6C	Bean, lima, seed	0.150000	1.000	1.000	
0603039000	6C	Bean, mung, seed	0.150000	1.000	1.000	
0603040000	6C	Bean, navy, seed	0.150000	1.000	1.000	
0603041000	6C	Bean, pink, seed	0.150000	1.000	1.000	
0603042000	6C	Bean, pinto, seed	0.150000	1.000	1.000	
0603098000	6C	Chickpea, seed	0.150000	1.000	1.000	
0603098001	6C	Chickpea, seed-babyfood	0.150000	1.000	1.000	
0603099000	6C	Chickpea, flour	0.150000	1.000	1.000	
0603182000	6C	Guar, seed	0.150000	1.000	1.000	
0603182001	6C	Guar, seed-babyfood	0.150000	1.000	1.000	
0603203000	6C	Lentil, seed	0.150000	1.000	1.000	
0801374000	8A	Tomatillo	0.700000	1.000	1.000	9E7598
0801375000	8A	Tomato	0.700000	1.000	1.000	9E7598
0801375001	8A	Tomato-babyfood	0.700000	1.000	1.000	9E7598
0801376000	8A	Tomato, paste	0.700000	5.400	1.000	9E7598
0801376001	8A	Tomato, paste-babyfood	0.700000	5.400	1.000	9E7598
0801377000	8A	Tomato, puree	0.700000	3.300	1.000	9E7598
0801377001	8A	Tomato, puree-babyfood	0.700000	3.300	1.000	9E7598
0801378000	8A	Tomato, dried	0.700000	14.300	1.000	9E7598
0801378001	8A	Tomato, dried-babyfood	0.700000	14.300	1.000	9E7598
0801379000	8A	Tomato, juice	0.700000	1.500	1.000	9E7598
0802148000	8BC	Eggplant	0.700000	1.000	1.000	9E7598
0802234000	8BC	Okra	0.700000	1.000	1.000	9E7598
0802270000	8B	Pepper, bell	0.700000	1.000	1.000	9E7598
0802270001	8B	Pepper, bell-babyfood	0.700000	1.000	1.000	9E7598
0802271000	8B	Pepper, bell, dried	0.700000	1.000	1.000	9E7598
0802271001	8B	Pepper, bell, dried-babyfood	0.700000	1.000	1.000	9E7598
0802272000	8BC	Pepper, nonbell	0.700000	1.000	1.000	9E7598
0802272001	8BC	Pepper, nonbell-babyfood	0.700000	1.000	1.000	9E7598
0802273000	8BC	Pepper, nonbell, dried	0.700000	1.000	1.000	9E7598
0901075000	9A	Cantaloupe	0.300000	1.000	1.000	1E7864
0901187000	9A	Honeydew melon	0.300000	1.000	1.000	1E7864
0901399000	9A	Watermelon	0.300000	1.000	1.000	1E7864
0901400000	9A	Watermelon, juice	0.300000	1.000	1.000	1E7864
0902021000	9B	Balsam pear	0.300000	1.000	1.000	
0902088000	9B	Chayote, fruit	0.300000	1.000	1.000	
0902102000	9B	Chinese waxgourd	0.300000	1.000	1.000	
0902135000	9B	Cucumber	0.300000	1.000	1.000	1E7864
0902308000	9B	Pumpkin	0.300000	1.000	1.000	
0902309000	9B	Pumpkin, seed	0.300000	1.000	1.000	
0902356000	9B	Squash, summer	0.300000	1.000	1.000	
0902356001	9B	Squash, summer-babyfood	0.300000	1.000	1.000	
0902357000	9B	Squash, winter	0.300000	1.000	1.000	
0902357001	9B	Squash, winter-babyfood	0.300000	1.000	1.000	
1001106000	10A	Citron	0.350000	1.000	1.000	
1001107000	10A	Citrus hybrids	0.350000	1.000	1.000	
1001108000	10A	Citrus, oil	30.000000	1.000	1.000	

1001240000	10A	Orange	0.350000	1.000	1.000	
1001241000	10A	Orange, juice	0.350000	1.800	1.000	
1001241001	10A	Orange, juice-babyfood	0.350000	1.800	1.000	
1001242000	10A	Orange, peel	0.350000	1.000	1.000	
1001369000	10A	Tangerine	0.350000	1.000	1.000	
1001370000	10A	Tangerine, juice	0.350000	2.300	1.000	
1002197000	10B	Kumquat	0.350000	1.000	1.000	
1002199000	10B	Lemon	0.350000	1.000	1.000	
1002200000	10B	Lemon, juice	0.350000	2.000	1.000	
1002200001	10B	Lemon, juice-babyfood	0.350000	2.000	1.000	
1002201000	10B	Lemon, peel	0.350000	1.000	1.000	
1002206000	10B	Lime	0.350000	1.000	1.000	
1002207000	10B	Lime, juice	0.350000	2.000	1.000	
1002207001	10B	Lime, juice-babyfood	0.350000	2.000	1.000	
1003180000	10C	Grapefruit	0.350000	1.000	1.000	
1003181000	10C	Grapefruit, juice	0.350000	2.100	1.000	
1003307000	10C	Pummelo	0.350000	1.000	1.000	
1100007000	11	Apple, fruit with peel	0.400000	1.000	1.000	
1100008000	11	Apple, peeled fruit	0.400000	1.000	1.000	
1100008001	11	Apple, peeled fruit-babyfood	0.400000	1.000	1.000	
1100009000	11	Apple, dried	0.400000	8.000	1.000	
1100009001	11	Apple, dried-babyfood	0.400000	8.000	1.000	
1100010000	11	Apple, juice	0.400000	1.300	1.000	
1100010001	11	Apple, juice-babyfood	0.400000	1.300	1.000	
1100011000	11	Apple, sauce	0.400000	1.000	1.000	
1100011001	11	Apple, sauce-babyfood	0.400000	1.000	1.000	
1100129000	11	Crabapple	0.400000	1.000	1.000	
1100173500	11	Goji berry	0.700000	1.000	1.000	
1100210000	11	Loquat	0.400000	1.000	1.000	
1100266000	11	Pear	0.400000	1.000	1.000	
1100266001	11	Pear-babyfood	0.400000	1.000	1.000	
1100267000	11	Pear, dried	0.400000	6.250	1.000	
1100268000	11	Pear, juice	0.400000	1.000	1.000	
1100268001	11	Pear, juice-babyfood	0.400000	1.000	1.000	
1100310000	11	Quince	0.400000	1.000	1.000	
1201090000	12A	Cherry	1.000000	1.000	1.000	1E7864
1201090001	12A	Cherry-babyfood	1.000000	1.000	1.000	1E7864
1201091000	12A	Cherry, juice	1.000000	1.500	1.000	1E7864
1201091001	12A	Cherry, juice-babyfood	1.000000	1.500	1.000	1E7864
1301055000	13A	Blackberry	4.000000	1.000	1.000	1E7864
1301056000	13A	Blackberry, juice	4.000000	1.000	1.000	1E7864
1301056001	13A	Blackberry, juice-babyfood	4.000000	1.000	1.000	1E7864
1301058000	13A	Boysenberry	4.000000	1.000	1.000	1E7864
1301208000	13A	Loganberry	4.000000	1.000	1.000	1E7864
1301320000	13A	Raspberry	4.000000	1.000	1.000	1E7864
1301320001	13A	Raspberry-babyfood	4.000000	1.000	1.000	1E7864
1301321000	13A	Raspberry, juice	4.000000	1.000	1.000	1E7864
1301321001	13A	Raspberry, juice-babyfood	4.000000	1.000	1.000	1E7864
1302057000	13B	Blueberry	0.500000	1.000	1.000	
1302057001	13B	Blueberry-babyfood	0.500000	1.000	1.000	
1304175000	13D	Grape	1.600000	1.000	1.000	
1304176000	13D	Grape, juice	1.600000	1.200	1.000	
1304176001	13D	Grape, juice-babyfood	1.600000	1.200	1.000	
1304179000	13D	Grape, wine and sherry	1.600000	1.000	1.000	
1307130000	13G	Cranberry	0.500000	1.000	1.000	1E7864
1307130001	13G	Cranberry-babyfood	0.500000	1.000	1.000	1E7864
1307131000	13G	Cranberry, dried	0.500000	1.000	1.000	1E7864
1307132000	13G	Cranberry, juice	0.500000	1.100	1.000	1E7864
1307132001	13G	Cranberry, juice-babyfood	0.500000	1.100	1.000	1E7864
1307359000	13G	Strawberry	0.500000	1.000	1.000	1E7864
1307359001	13G	Strawberry-babyfood	0.500000	1.000	1.000	1E7864
1307360000	13G	Strawberry, juice	0.500000	1.000	1.000	1E7864
1307360001	13G	Strawberry, juice-babyfood	0.500000	1.000	1.000	1E7864
1400003000	14	Almond	0.020000	1.000	1.000	
1400003001	14	Almond-babyfood	0.020000	1.000	1.000	
1400004000	14	Almond, oil	0.020000	1.000	1.000	
1400004001	14	Almond, oil-babyfood	0.020000	1.000	1.000	
1400059000	14	Brazil nut	0.020000	1.000	1.000	
1400068000	14	Butternut	0.020000	1.000	1.000	
1400081000	14	Cashew	0.020000	1.000	1.000	
1400092000	14	Chestnut	0.020000	1.000	1.000	

1400155000	14	Hazelnut	0.020000	1.000	1.000
1400156000	14	Hazelnut, oil	0.020000	1.000	1.000
1400185000	14	Hickory nut	0.020000	1.000	1.000
1400213000	14	Macadamia nut	0.020000	1.000	1.000
1400269000	14	Pecan	0.020000	1.000	1.000
1400278000	14	Pine nut	0.020000	1.000	1.000
1400282000	14	Pistachio	0.020000	1.000	1.000
1400391000	14	Walnut	0.020000	1.000	1.000
3100046000	31	Beef, meat byproducts	0.020000	1.000	1.000
3100046001	31	Beef, meat byproducts-babyfood	0.020000	1.000	1.000
3100047000	31	Beef, fat	0.020000	1.000	1.000
3100047001	31	Beef, fat-babyfood	0.020000	1.000	1.000
3100048000	31	Beef, kidney	0.020000	1.000	1.000
3100049000	31	Beef, liver	0.020000	1.000	1.000
3100049001	31	Beef, liver-babyfood	0.020000	1.000	1.000
3200171000	32	Goat, fat	0.020000	1.000	1.000
3200172000	32	Goat, kidney	0.020000	1.000	1.000
3200173000	32	Goat, liver	0.020000	1.000	1.000
3500340000	35	Sheep, meat byproducts	0.020000	1.000	1.000
3500341000	35	Sheep, fat	0.020000	1.000	1.000
3500341001	35	Sheep, fat-babyfood	0.020000	1.000	1.000
3500342000	35	Sheep, kidney	0.020000	1.000	1.000
3500343000	35	Sheep, liver	0.020000	1.000	1.000
8601000000	86A	Water, direct, all sources	0.006690	1.000	1.000
8602000000	86B	Water, indirect, all sources	0.006690	1.000	1.000
9500020000	O	Avocado	0.500000	1.000	1.000
9500111000	O	Coconut, meat	0.020000	1.000	1.000
9500111001	O	Coconut, meat-babyfood	0.020000	1.000	1.000
9500112000	O	Coconut, dried	0.020000	1.000	1.000
9500113000	O	Coconut, milk	0.020000	1.000	1.000
9500114000	O	Coconut, oil	0.020000	1.000	1.000
9500177000	O	Grape, leaves	1.600000	1.000	1.000
9500178000	O	Grape, raisin	1.600000	4.300	1.000
9500188000	O	Hop	15.000000	1.000	1.000
9500372000	O	Tea, dried	40.000000	1.000	1.000
9500373000	O	Tea, instant	40.000000	1.000	1.000

Attachment 4: Chronic Results File

US EPA

Ver. 3.16, 03-08-d

DEEM-FCID Chronic analysis for ACEQUINOCYL

NHANES 2003-2008 2-day

Residue file name: I:\\$Acequinocyl\006329Chronic.R08

Adjustment factor #2 used.

Analysis Date 07-08-2016/08:18:59

Residue file dated: 07-05-2016/13:06:48

Reference dose (RfD, Chronic) = .027 mg/kg bw/day

=====

Total exposure by population subgroup

Population Subgroup	Total Exposure	
	mg/kg body wt/day	Percent of Rfd
Total US Population	0.004542	16.8%
Hispanic	0.005145	19.1%
Non-Hisp-White	0.004427	16.4%
Non-Hisp-Black	0.004476	16.6%
Non-Hisp-Other	0.004651	17.2%
Nursing Infants	0.003987	14.8%
Non-Nursing Infants	0.009079	33.6%
Female 13+ PREG	0.003960	14.7%
Children 1-6	0.014734	54.6%
Children 7-12	0.005529	20.5%
Male 13-19	0.003337	12.4%
Female 13-19/NP	0.003112	11.5%
Male 20+	0.003418	12.7%
Female 20+/NP	0.003343	12.4%
Seniors 55+	0.003356	12.4%
All Infants	0.007507	27.8%
Female 13-50	0.003290	12.2%
Children 1-2	0.018976	70.3%
Children 3-5	0.013259	49.1%
Children 6-12	0.006188	22.9%
Youth 13-19	0.003224	11.9%
Adults 20-49	0.003413	12.6%
Adults 50-99	0.003357	12.4%
Female 13-49	0.003280	12.1%

Attachment 5: Acute Exposure and Risk Estimates – Food Only

US EPA
 DEEM-FCID ACUTE Analysis for ACEQUINOCYL
 Residue file: 006329Acute_Food Only.R08
 Analysis Date: 07-05-2016/13:17:02
 NOEL (Acute) = 7.300000 mg/kg body-wt/day
 RAC/FF intake summed over 24 hours
 Run Comment: ""

Ver. 3.18, 03-08-d
 NHANES 2003-2008 2-Day
 Adjustment factor #2 NOT used.
 Residue file dated: 07-05-2016/13:09:34

=====

Summary calculations--per capita:

--- 95th Percentile----			--- 99th Percentile----			---99.9th Percentile----		
Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
Total US Population:								
0.014618	20.02	499	0.032449	44.45	224	0.071958	98.57	101
All Infants:								
0.031328	42.91	233	0.062699	85.89	116	0.122729	168.12	59
Children 1-2:								
0.051725	70.86	141	0.089836	123.06	81	0.182892	250.54	39
Children 3-5:								
0.037841	51.84	192	0.061711	84.54	118	0.102229	140.04	71
Children 6-12:								
0.019969	27.36	365	0.031445	43.08	232	0.052229	71.55	139
Youth 13-19:								
0.009881	13.54	738	0.016331	22.37	446	0.039369	53.93	185
Adults 20-49:								
0.010213	13.99	714	0.016851	23.08	433	0.031151	42.67	234
Adults 50-99:								
0.009757	13.37	748	0.015688	21.49	465	0.025630	35.11	284
Female 13-49:								
0.010161	13.92	718	0.016733	22.92	436	0.032322	44.28	225

Attachment 6: Chronic Exposure and Risk Estimates – Food Only

US EPA

Ver. 3.16, 03-08-d

DEEM-FCID Chronic analysis for ACEQUINOCYL

NHANES 2003-2008 2-day

Residue file name: I:\\$Acequinocyl\006329C_Food Only.R08

Adjustment factor #2 used.

Analysis Date 07-01-2016/14:26:54

Residue file dated: 07-01-2016/14:22:10

Reference dose (RfD, Chronic) = .027 mg/kg bw/day

=====

Total exposure by population subgroup

Population Subgroup	Total Exposure	
	mg/kg body wt/day	Percent of Rfd
Total US Population	0.004402	16.3%
Hispanic	0.005011	18.6%
Non-Hisp-White	0.004283	15.9%
Non-Hisp-Black	0.004360	16.1%
Non-Hisp-Other	0.004490	16.6%
Nursing Infants	0.003860	14.3%
Non-Nursing Infants	0.008613	31.9%
Female 13+ PREG	0.003828	14.2%
Children 1-6	0.014555	53.9%
Children 7-12	0.005412	20.0%
Male 13-19	0.003241	12.0%
Female 13-19/NP	0.003004	11.1%
Male 20+	0.003287	12.2%
Female 20+/NP	0.003196	11.8%
Seniors 55+	0.003220	11.9%
All Infants	0.007146	26.5%
Female 13-50	0.003150	11.7%
Children 1-2	0.018774	69.5%
Children 3-5	0.013089	48.5%
Children 6-12	0.006066	22.5%
Youth 13-19	0.003122	11.6%
Adults 20-49	0.003273	12.1%
Adults 50-99	0.003218	11.9%
Female 13-49	0.003141	11.6%